

Del Norte Region

# SB 743 IMPLEMENTATION PLAN

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# Del Norte Region SB 743 Implementation Plan

## Prepared for:

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# TABLE OF CONTENTS

<b>1</b>	<b>BACKGROUND</b>	<b>1</b>
1.1	SB 743 Legislation	1
1.2	Governor’s Office of Planning and Research (OPR) Technical Advisory	1
1.3	Previous Transportation Studies in the Del Norte Region	2
1.4	Regulatory Environment	2
<b>2</b>	<b>PURPOSE AND OBJECTIVE OF VMT ANALYSIS</b>	<b>3</b>
2.1	Purpose of VMT Analysis	3
2.2	Purpose of SB 743 Implementation Plan	3
2.3	Coordination with Other Agencies	3
<b>3</b>	<b>LAND DEVELOPMENT PROJECTS</b>	<b>4</b>
3.1	Overview of Analysis	4
3.2	Screening Criteria	6
3.2.1	Small Projects	7
3.2.2	Local-Serving Retail and Similar Land Uses	7
3.2.3	Local-Serving Public Facilities	7
3.2.4	Affordable Housing Projects	7
3.2.5	Redevelopment Projects That Result in a Net Reduction of VMT	7
3.3	Significance Thresholds	8
3.4	Mitigation	9
3.5	Step by Step Summary of VMT Analysis for Land Development Projects	11
3.6	Additional VMT Methodologies for Unusual Situations	11
<b>4</b>	<b>UPDATE OF THE GENERAL PLAN AND COMMUNITY PLANS</b>	<b>15</b>
4.1	VMT Analysis	15
4.2	Significance Thresholds	15
4.3	Mitigation	15
<b>5</b>	<b>TRANSPORTATION PROJECTS</b>	<b>16</b>
5.1	Screening Criteria	16

5.2	Vehicle Miles Traveled Analysis .....	17
5.3	Significance Thresholds.....	18
5.4	Mitigation.....	18
<b>6</b>	<b>TRANSPORTATION ANALYSIS .....</b>	<b>19</b>
6.1	Need for a Study .....	19
6.2	Study Parameters.....	19
6.3	Analysis of Project Effects on the Roadway System .....	19
6.4	Project Trip Generation and Distribution .....	20
6.5	Scenarios to be Studied .....	21
6.6	Need for Roadway Improvements.....	21
6.7	Effect of Trucks on Roadway Pavements.....	22
<b>7</b>	<b>ADDITIONAL RESOURCES FOR VEHICLE MILES TRAVELED ANALYSIS .....</b>	<b>23</b>

**LIST OF FIGURES**

Figure 3-1 – VMT Analysis for Land Use Projects.....	13
Figure 3-2 – Del Norte Region Traffic Zone Analysis Maps .....	14

**LIST OF TABLES**

Table 3-1 – Vehicle Miles Traveled Analysis for Del Norte Region Traffic Analysis Zones.....	6
Table 3-2 – Vehicle Miles Traveled Analysis of Various Land Use Types .....	8

**APPENDICES**

- Appendix A – Screening Criteria and Threshold Evidence
- Appendix B – Potential Projects for Use in VMT Mitigation
- Appendix C – Case Studies

# 1 BACKGROUND

This chapter provides background information on Senate Bill 743 (SB 743) and the need to conduct vehicle miles traveled (VMT) analyses for CEQA transportation studies.

## 1.1 SB 743 Legislation

SB 743 was passed by the legislature and signed into law in the fall of 2013. This legislation led to a change in the way that transportation impacts will be measured under the California Environmental Quality Act (CEQA). Starting on July 1, 2020, automobile delay and level of service (LOS) may no longer be used as the performance measure to determine the transportation impacts of land development projects under CEQA. Instead, an alternative metric that supports the goals of the SB 743 legislation will be required. Although there is no requirement to use any particular metric, the use of VMT has been recommended by the Governor's Office of Planning and Research (OPR). This requirement does not modify the discretion lead agencies have to develop their own methodologies or guidelines, or to analyze impacts to other components of the transportation system, such as walking, bicycling, transit, and safety. SB 743 also applies to transportation projects, although agencies were given flexibility in the determination of the performance measure for these types of projects. SB 743 does not affect General Plans, traffic impact fee programs, or the Subdivision Act.

The intent of SB 743 is to bring CEQA transportation analyses into closer alignment with other statewide policies regarding greenhouse gases, complete streets, and smart growth. It is also intended to promote public health through active transportation such as bicycling and walking. Using VMT as a performance measure instead of LOS is intended to discourage suburban sprawl, reduce greenhouse gas emissions, and encourage the development of smart growth, complete streets, and multimodal transportation networks.

## 1.2 Governor's Office of Planning and Research (OPR) Technical Advisory

The SB 743 legislation designated OPR to write detailed guidelines for implementation. The process of writing guidelines started in January 2014 and concluded in 2018. SB 743 was incorporated into CEQA by the Natural Resources Agency in December 2018 with a required implementation date of July 1, 2020. The incorporation documents included a December 2018 Technical Advisory written by OPR which represents the current statewide guidance for the implementation of SB 743.

Under CEQA, lead agencies can determine their own methodologies and significance thresholds for CEQA technical analyses, but they are also required to provide substantial evidence as a basis of their decisions, if challenged. In its Technical Advisory, OPR generally provides substantial evidence for its recommendation. However, even OPR's recommendations are subject to challenge, and if an agency were to rely on the Technical Advisory recommendations, that agency would need to be prepared to defend the recommendations and produce the substantial evidence. OPR is not in a position to defend the Technical Advisory recommendations for agencies that choose to use it.

While OPR provides recommendations on many aspects of conducting a CEQA transportation analysis using VMT, OPR's guidance is not comprehensive and some key decisions are left for lead agencies to determine. Examples of key decisions left to the discretion of lead agencies include

VMT analysis methodology, significance thresholds for land development projects in rural areas, and significance thresholds for transportation projects in all areas.

### 1.3 Previous Transportation Studies in the Del Norte Region

Overall planning for transportation facilities in the Del Norte region is guided by the Regional Transportation Plan (RTP), which was completed in 2016. The RTP provides traffic analysis of existing conditions and a future planning horizon of 2036. It also provides a prioritized set of transportation improvements that the region will be pursuing in the future.

Future traffic forecasts for the RTP were prepared using the Del Norte County Travel Demand Model (DNCTDM) which was developed by Caltrans District 1. While the DNCTDM may have applications in traffic forecasting or other purposes, this report recommends using the California Statewide Travel Demand Model (CSTDM) for VMT analysis of typical projects. Caltrans has provided base-year (2010) and horizon year (2040) VMT/capita and VMT/employee values for the entire state broken down by county and by geographical units known as traffic analysis zones (TAZ's) within each county. The CSTDM was considered a better choice due to a couple of considerations:

- The DNCTDM would have to be modified to produce VMT/capita and VMT/employee values that are already available from the CSTDM.
- The CSTDM incorporates travel to other California counties (primarily Humboldt County) that is an important consideration in VMT analysis and the DNCTDM does not.

Although this report does not recommend use of the DNCTDM for VMT analysis of typical projects at this time, it is possible that the current version of the DNCTDM could be modified to be appropriate for VMT analysis or a future version of the DNCTDM could be developed that would be appropriate for VMT analysis.

### 1.4 Regulatory Environment

The adoption of SB 743 into CEQA requires a change in the way that lead agencies throughout California conduct transportation studies for CEQA environmental documents. This report provides recommendations for accommodating this change. Examples of current lead agencies in the Del Norte Region include the following:

- Del Norte County
- Del Norte County Local Agency Formation Commission
- Del Norte County Local Hospital District
- Del Norte County Unified School District
- Del Norte County Local Transportation Commission
- Del Norte Solid Waste Management Authority
- City of Crescent City
- Crescent City Harbor District

## 2 PURPOSE AND OBJECTIVE OF VMT ANALYSIS

### 2.1 Purpose of VMT Analysis

Given the information provided in Chapter 1, the purposes of VMT analysis can be stated as follows:

- VMT analysis is needed to meet statewide requirements for transportation analyses conducted under CEQA.
- VMT analysis (along with efforts to reduce VMT) can support statewide goals for climate change, sustainability, multimodal transportation networks and active transportation.

### 2.2 Purpose of SB 743 Implementation Plan

The SB 743 Implementation Plan provides recommendations at a regional level for the conduct of CEQA transportation analyses using VMT to incorporate SB 743. While this plan provides recommendations, CEQA leaves the final authority to determine methodologies and thresholds to lead agencies (i.e. the City of Crescent City, Del Norte County, and other local agencies). Lead agencies within the Del Norte region may wish to adopt the recommendation included in this plan or write their own guidelines based on concepts described in this plan. Lead agencies should be prepared to provide justification to support their decisions regarding VMT analysis and thresholds. Both OPR's Technical Advisory and this Implementation Plan may be used in providing justification.

Although this plan is intended to be comprehensive, not all aspects of VMT analysis can be addressed in a single document. Lead agency staff will need to use judgment in applying the information in this plan to specific projects and situations. Exceptions and additions to the recommendations may need to occur on a case-by-case basis.

### 2.3 Coordination with Other Agencies

Preparation of a VMT analysis will require coordination with other agencies as follows:

- Caltrans will review and provide comments on certain VMT analyses, particularly if the project requires a Caltrans encroachment permit to modify a state highway or if it is considered to have a substantial effect on state highway facilities. Caltrans is currently developing guidance to determine how to select projects that have a substantial effect on state highway facilities. Lead agencies have the obligation to respond to comments made by Caltrans, but they can decide how best to incorporate comments into the analysis and the decision process.
- Although most VMT analyses are expected to be conducted using the methodology included in these guidelines, it may be decided that a regional travel demand model is the most appropriate methodology for some projects. The Del Norte County Travel Demand Model described in Chapter 1 may be used for VMT analysis in these cases. Prior to using the model, consideration should be given as to whether updates to the model are needed to reflect roadway network or land use changes that have occurred since 2016.
- Detailed coordination with adjacent counties and jurisdictions will not normally be required unless a proposed mitigation measure crosses jurisdictional boundaries.

## 3 LAND DEVELOPMENT PROJECTS

This chapter provides guidance on conducting VMT analyses for land development projects, including single-use projects, mixed-use projects, redevelopment projects, and specific plans.

### 3.1 Overview of Analysis

The VMT analysis methodology for land development projects was developed in order to accomplish the following:

- Meet the requirements of CEQA, including the new SB 743 regulations that were adopted into CEQA in December 2018 and go into effect on July 1, 2020.
- Provide for transportation improvements to be built that benefit residents of the Del Norte region and facilitate travel by walking, bicycling, and transit.
- Provide for analysis and mitigation of VMT impacts in a way that does not create an undue burden for project applicants and lead agencies in the Del Norte region.

The starting point for the VMT analysis provided in these guidelines was OPR's December 2018 technical advisory. OPR recommends determining the project VMT/capita or VMT/employee and comparing it to regional and/or city-wide averages. For urban, suburban, and rural areas within counties that are part of Metropolitan Planning Areas (MPO's), OPR recommends use of VMT/capita and VMT/employee significance thresholds that are 15% below the appropriate averages. OPR also states that for rural areas outside MPO's, significance thresholds may be best determined on a case-by-case basis.

Building on the OPR guidance, these guidelines provide a refined VMT analysis specifically tailored to the Del Norte region. Since Del Norte County is a non-MPO county, OPR's recommendation of determining significance thresholds on a case-by-case basis apply directly to the Del Norte region.

Project VMT/capita and VMT/employee can be most easily determined using a travel demand model, either by running the model for each specific project VMT analysis or by creating maps and tables showing average VMT/capita and VMT/employee values for the area of interest. The Del Norte County Travel Demand Model described in Chapter 1 was considered for use in conducting VMT analysis, but it was decided not to use this model for the following reasons:

- While the Del Norte regional model was set up to provide traffic forecasts on individual roadways and regional VMT values, modifications or additions to the model would be needed to provide the VMT/capita and VMT/employee values recommended as performance measures for SB 743 analyses.
- OPR's technical advisory recommends that VMT calculations include VMT generated outside regional boundaries and the Del Norte regional model truncates trips at the regional boundary.

In its Technical Advisory, OPR refers to the process described above for small projects as "map-based screening". OPR recommends this methodology for determining which projects are located in VMT-efficient areas and can therefore be "screened out" from requiring a VMT analysis. For the



Del Norte region, this process is extended to allow for the map-based analysis of VMT/capita and VMT/employee values.

Thresholds of significance for VMT analysis are also based on OPR's recommendations, but some refinements have been made to reflect conditions in the Del Norte region:

- OPR recommends that residential and office projects compare project VMT/capita or VMT/employee to regional or city-wide averages. For the Del Norte region, these comparisons are made between project VMT and the average VMT/capita or VMT/employee for the traffic analysis zone (TAZ) in which the project is located. A TAZ typically represents an area with common travel characteristics throughout the geographic area of the TAZ.
- OPR recommends a significance threshold of 15% below average. For the Del Norte region, the significance threshold is below the TAZ average. Therefore, projects that have a VMT/capita or VMT/employee equal to or above the TAZ average would be presumed to have a significant transportation impact.
- OPR recommends that local-serving retail projects can be presumed to have a less than significant transportation impact. This is because local-serving retail typically reduces trip lengths by providing additional destinations that tend to replace trips to more distant retail locations. For the Del Norte region, this concept is also used and it is extended to other types of local-serving projects such as public facilities, parks, and local-serving medical offices. Nearly all retail projects expected to be developed in the Del Norte region are expected to be local serving. An exception may occur if a retail development were to be built that would serve a large number of customers traveling into the Del Norte region for the purpose of visiting the retail facility (for example, a Walmart or Home Depot retail store). OPR recommends that a retail development greater than 50,000 sq. ft. in size may be considered regional rather than local-serving and lead agencies may use this guidance in determining the status of retail projects.
- OPR does not recommend a specific threshold for industrial projects. For the Del Norte region, an industrial project has a significant impact if its VMT/employee equals or exceeds average VMT/employee for the TAZ in which the project is located. It should be noted that goods movement is not subject to VMT analysis. Therefore, goods movement trips associated with an industrial project would not be included when determining VMT/employee.

While many projects will go through the process described above to analyze VMT, some projects will be determined to be "screened out" due to project size or project type. These projects are described in Section 3.2.

Figure 3-1 shows a flow chart that summarizes the VMT analysis process. The most recent Del Norte region Traffic Zone Analysis Maps are shown in Figure 3-2. These maps provide a general indication of the location of TAZ's within The Del Norte region. At the time of preparation of this report, more detailed TAZ maps were available on the website of the Northern California Section of the Institute of Transportation Engineers ([www.norcalite.org](http://www.norcalite.org)). In the future these maps may be

available from the Caltrans SB 743 website (<https://dot.ca.gov/programs/transportation-planning/office-of-smart-mobility-climate-change/sb-743>). The lead agency should be consulted if different there is a discrepancy in Caltrans and ITE maps posted for the same area. VMT/capita and VMT/employee values for base year conditions based on the CSTDM are shown in Table 3-1.

It should be noted that some projects include a mix of land uses. For these projects, one way to conduct the VMT analysis would be to use the methodology described above and analyze VMT impacts and mitigation for each land use type separately. An alternative approach would be to conduct an analysis to determine the VMT reduction that would occur due to internal capture (i.e. trips between different land uses that occur within the project site).

**Table 3-1 Vehicle Miles Traveled Analysis for Del Norte Region Traffic Analysis Zone**

Zone Number	Base Year Daily VMT Per Capita	Base Year Daily VMT Per Employee
100	5.08	23.07
101	7.0	20.92
102	7.96	21.62
103	24.71	22.33
104	30.13	39.79

- (1) Source: California Statewide Travel Demand Model. See Caltrans SB 743 Website <https://dot.ca.gov/programs/transportation-planning/office-of-smart-mobility-climate-change/sb-743> and Northern California Institute of Transportation Engineers website [www.norcalite.org](http://www.norcalite.org).
- (2) This table is current as of the time of preparation of this report and should be updated whenever Caltrans provides updated VMT per capita and VMT per employee information.

### 3.2 Screening Criteria

Following is a description of projects that would have a less than significant transportation impact due to project size or project type. If a project meets at least one of the following screening criteria, it would not require a detailed VMT analysis. However, a discussion summarizing the applicability of relevant screening criteria should be prepared for projects for traffic generating projects in excess of 60 trips per day.

It should be noted that, in addition to the list below, OPR’s Technical Advisory recommends that projects in Transit Priority Areas (TPA’s) may be screened out from consideration to conduct a VMT analysis. However, TPA’s require the presence of a rail station or buses running at headways of 15 minutes or less and there are no TPA’s in the Del Norte region.

### 3.2.1 Small Projects

Some projects are small enough that they can be presumed to have a less than significant transportation impact without doing a detailed VMT analysis. For The Del Norte region, projects that generate less than 110 trips per day can be presumed to have a less than significant impact, per OPR's technical Advisory. Trip generation would normally be determined using the current edition of the Institute of Transportation Engineers (ITE) Trip Generation Manual. Other potential sources include the San Diego Association of Governments (SANDAG) trip generation guide (Not So Brief Guide of Vehicular Traffic Generation Rates in the San Diego Region, April 2002), articles in the ITE Journal, and customized trip generation rates based on individual research.

### 3.2.2 Local-Serving Retail and Similar Land Uses

Per OPR's Technical Advisory, local-serving retail uses are presumed to have a less than significant impact on VMT since they tend to attract trips from adjacent areas that would have otherwise been made to more distant retail locations. This presumption also applies in the Del Norte region.

Other developments that are not technically retail may fall under this category such as medical offices, insurance agents, and other offices that are intended to serve the general public. Project applicants may submit a written analysis to the lead agency for a determination on whether the local serving status applies.

### 3.2.3 Local-Serving Public Facilities (Excluding Schools)

Similar to retail land uses, local-serving public facilities other than schools are presumed to have a less than significant impact on VMT. This would include government facilities intended to serve the local public, and parks.

### 3.2.4 Affordable Housing Projects

OPR's Technical Advisory allows for a less than significant finding for transportation impacts of residential projects that are 100% affordable housing located in infill areas.

### 3.2.5 Redevelopment Projects That Result in a Net Reduction of VMT

Per CEQA, projects are considered to have a less than significant impact if they result in a net reduction in the relevant performance measure (in this case VMT). Therefore, redevelopment projects in the Del Norte region that generate less VMT than the existing project they are replacing would be considered to have a less than significant impact on VMT. Since VMT/capita and VMT/employee are efficiency metrics, a redevelopment project that would produce more VMT than the existing project it is replacing would need to conduct a VMT analysis assuming the proposed land use (with no credit taken for the existing land use) to determine whether the proposed project meets the applicable significance thresholds (i.e. a value below the appropriate average VMT/capita or VMT/employee).

### 3.3 Significance Thresholds

Significance thresholds for land development projects are summarized below. Additional discussion and substantial evidence can be found in Appendix A.

- Residential Projects: A significant transportation impact occurs if the project VMT per capita equals or exceeds the average VMT per capita for the TAZ where the project is located.
- Office Projects: A significant transportation impact occurs if the project VMT per employee equals or exceeds the average VMT per employee for the TAZ where the project is located.
- Regional Retail Projects: A significant transportation impact occurs if the project results in a net increase in VMT.
- Industrial Projects: A significant transportation impact occurs if the project VMT per employee exceeds the average VMT per employee for the TAZ where the project is located.

Table 3-2 includes information on project types not described above.

*Table 3-2 VMT Analysis of Various Land Use Types*

VMT Analysis Methodology	Applicable Project Types	
Residential	<ul style="list-style-type: none"> <li>• Congregate Care Facility</li> <li>• Estate Housing</li> <li>• Mobile Home</li> </ul>	<ul style="list-style-type: none"> <li>• Multiple Dwelling Unit (all sizes)</li> <li>• Retirement/Senior Citizen Housing</li> <li>• Single Family Detached</li> </ul>
Office/Employment	<ul style="list-style-type: none"> <li>• Agriculture</li> <li>• Hospital: Convalescent/Nursing</li> <li>• Hospital: General</li> <li>• Industrial/Business Park</li> <li>• Scientific Research and Development</li> <li>• Hotel (w/convention facilities/restaurants)</li> <li>• Motel</li> <li>• Resort Hotel</li> <li>• Military Base</li> </ul>	<ul style="list-style-type: none"> <li>• Commercial Office</li> <li>• Corporate Headquarters/Single Tenant Office</li> <li>• Medical Office</li> <li>• Government Office (Primarily Office with Employees)</li> <li>• Industrial: Manufacturing/Assembly</li> <li>• Industrial: Rental Storage</li> <li>• Industrial: Truck Terminal</li> <li>• Industrial: Warehousing</li> </ul>
Retail and Public Facilities	<ul style="list-style-type: none"> <li>• Shopping Center</li> <li>• Automobile Services</li> <li>• Convenience Market Chain</li> <li>• Discount Store/Discount Club</li> <li>• Drugstore</li> <li>• Furniture Store</li> </ul>	<ul style="list-style-type: none"> <li>• Racquetball/Tennis/Health Club</li> <li>• Sport Facility (Indoor or Outdoor)</li> <li>• Winery</li> <li>• Special Event Facility</li> <li>• Schools (unless determined to draw students from outside the local area)</li> </ul>

VMT Analysis Methodology	Applicable Project Types	
	<ul style="list-style-type: none"> <li>• Lumber/Home Improvement Store</li> <li>• Nursery</li> <li>• Restaurant</li> <li>• Specialty Retail Center/Strip Commercial</li> <li>• Supermarket</li> <li>• Financial Institution (Bank or Credit Union)</li> <li>• Bowling Center</li> <li>• Movie Theater</li> </ul>	<ul style="list-style-type: none"> <li>• Day Care Center/Child Care Center</li> <li>• Library</li> <li>• Department of Motor Vehicles</li> <li>• Government Offices (Primarily Serving Customers?)</li> <li>• Post Office</li> <li>• Park &amp; Ride Lot</li> <li>• Transit Station</li> <li>• Neighborhood Park (developed or undeveloped)</li> </ul>

### 3.4 Mitigation

Using the methodology described above, most projects that do not meet the screening criteria would be expected to have a significant VMT impact. The recommended method of VMT mitigation is for projects to provide transportation improvements that facilitate travel by walking, bicycling, or transit. This can be accomplished as follows:

- A survey may be conducted within one half mile of the project site to determine any gaps in facilities for walking, bicycling, or transit. For example, this could include repair of damaged sidewalks, installation of curb ramps, provision of bicycle lanes, or improvement to transit stops or access to transit stops.
- If suitable improvements are not found within one half mile of the project site, improvements could be suggested in more distant locations as long as they support walking, bicycling, and transit in the unincorporated area of the Del Norte region.
- The project list in Appendix B based on the Del Norte region Active Transportation Plan can be consulted for potential projects that could be used for VMT mitigation.
- In order to provide VMT mitigation for CEQA purposes, the improvements and/or payments provided must be substantial and in proper scale with the proposed development. The lead agency has the authority to determine whether a particular set of mitigation measures is appropriate for a particular project. However, the recommendations listed below are provided to assist lead agencies in making decisions regarding mitigation.
- A VMT mitigation cost per single family home (or the equivalent), consisting of the following improvements (or a combination thereof) is recommended as both substantial and in scale with the development:
  - 0.5 new curb ramps
  - 15 linear feet of sidewalk with no curb and gutter

- 7.5 linear feet of sidewalk with curb, gutter, and asphalt patch

- The improvements recommended above are based on the scenario of a single-family home in Crescent City with a typical lot size (60 ft. by 120 ft.) that is required to build sidewalk as a frontage improvement on a street that already has curb and gutter. It is estimated that 60 ft. of sidewalk would be needed at a cost of \$85 per linear foot or a total of \$5,100. For offsite mitigation for VMT impacts, it is recommended that 25% of this value be used or \$1,275. This is equal to the estimated cost of the three improvements described above. All costs are in 2020 dollars.
- The intended location of improvements may be relocated by lead agency staff if all or a portion of the improvements are completed but not by the permittee or a different location is agreeable between the permittee and lead agency staff or a comparable improvement is agreeable between the permittee and lead agency staff. At the time of design and/or construction, up to an additional 25% increase in area of the constructed improvements can be required by lead agency staff if it would result in an infrastructure gap closure. facilities may be used instead of the improvements identified above if a suitable project is approved by the lead agency.
- If the lead agency is willing to accept a payment instead of the construction of physical improvements, recommended values are \$1,275 per single family home (or equivalent), plus 25% for infrastructure gap closures, and an additional 50% for administration and compliance with public works construction obligations for public agencies applied to the (single family home (or equivalent) plus infrastructure gap closure) project amount. It would be understood that the improvements would be made by the lead agency. In cases where a payment is accepted in lieu of transportation improvements, the payment must be adjusted for inflation based on the date of project approval using the Consumer Price Index for Urban Wage Earners and Clerical Workers (CPI-W). Also, when a payment is used for mitigation, the lead agency must be prepared to provide assurances that the payment will be used for appropriate transportation improvements.
- Bicycle facilities may be used instead of the improvements identified above if a suitable project is approved by the lead agency.
- For project types other than single family homes, trip generation should be used to determine the amount of development equivalent to single family homes. For example, if single family homes generate trips at a rate of 10 trips per day and office generates trips at a rate of 20 trips per day per 1,000 sq. ft., a 10,000 sq. ft. office would generate the same number of daily trips as 20 single family homes (i.e. each would generate 200 daily trips). The level of mitigation recommended for either of these developments would be two new curb ramps. 200 linear feet of sidewalk (with no curb and gutter), or 120 feet of sidewalk (with curb, gutter, and asphalt patch).
- Trip generation would normally be determined using an accepted trip generation guide such as the Institute of Transportation Engineers (ITE) Trip Generation Manual. Other potential sources include the San Diego Association of Governments (SANDAG) trip generation guide (Not So Brief Guide of Vehicular Traffic Generation Rates in the San Diego

Region, April 2002), articles in the ITE Journal, and customized trip generation rates based on individual research.

- It should be noted that projects proposed for mitigation may not exactly match the number of curb ramps or linear feet of improvements noted above and rounding up may be needed to create a viable project or logical endpoint. For example, development of anywhere from 11 to 20 single family homes would require the installation of two curb ramps as mitigation since it is not practical to install a partial curb ramp. As an additional example, if a development of 20 single family homes is proposed, and a gap in sidewalks 220 feet (with no curb and gutter) is found near the project site, the recommended mitigation would be 220 feet of sidewalk in order completely fill the gap rather than building 200 feet of sidewalk and leaving a 20 foot gap. As mentioned above, an increase of up to 25% in the area of the improvement is considered reasonable for gap closures.
- Implementing mitigation along the frontage of a vacant parcel is discouraged as development of vacant parcels should result in improvements.
- Gap closures and accessible curb ramps are a priority for mitigation. The focus should be on (in descending order) arterials, major collectors, minor collectors, and local roadways.
- If a project provides mitigation that meets the recommended mitigation costs described above (or similar mitigation approved by the lead agency), it can presume a 1% reduction in VMT for reporting purposes. In most cases, this will be sufficient to reduce a project's VMT impacts to insignificant levels.

### 3.5 Step by Step Summary of VMT Analysis for Land Development Projects

Following is a step by step summary of the process for VMT analysis of land development projects. Several case study examples are provided in Appendix C:

- Determine whether the project is screened out of the requirements to conduct a VMT analysis using the screening criteria described in Section 3.2.
- If the project is not screened out, determine the TAZ where the project is located based on the maps shown in Figure 3-2 or the more detailed maps as described in Section 3.1.
- Determine the average VMT/capita or VMT/employee for the TAZ in which the project is located based on Table 3-1.
- Unless the project has unusual characteristics that would result in less VMT generation than a typical project, assume the project VMT/capita or VMT/employee is the same as the average for the TAZ in which the project is located. This would normally result in a significant VMT impact.
- Provide VMT mitigation as described in Section 3.4.

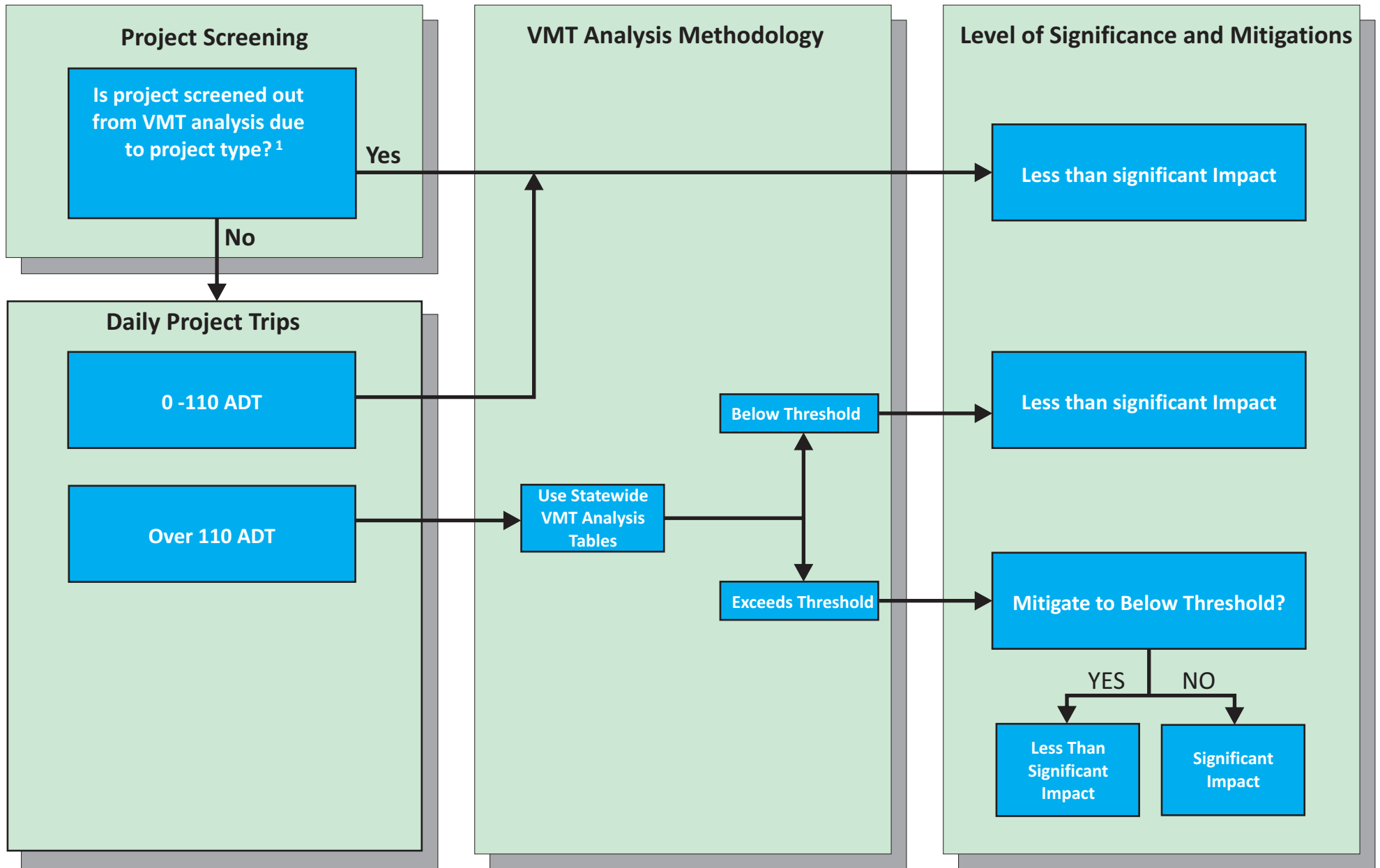
### 3.6 Additional VMT Methodologies for Unusual Situations

For some projects, it may be appropriate to conduct VMT analysis in a manner different than what is described above. This could apply to very large projects that are considered to require a model

run rather than the methodology described above. It could also apply to projects that have unusual VMT characteristics for which the average VMT/capita or VMT/employee in the TAZ where the project is located would not be applicable.

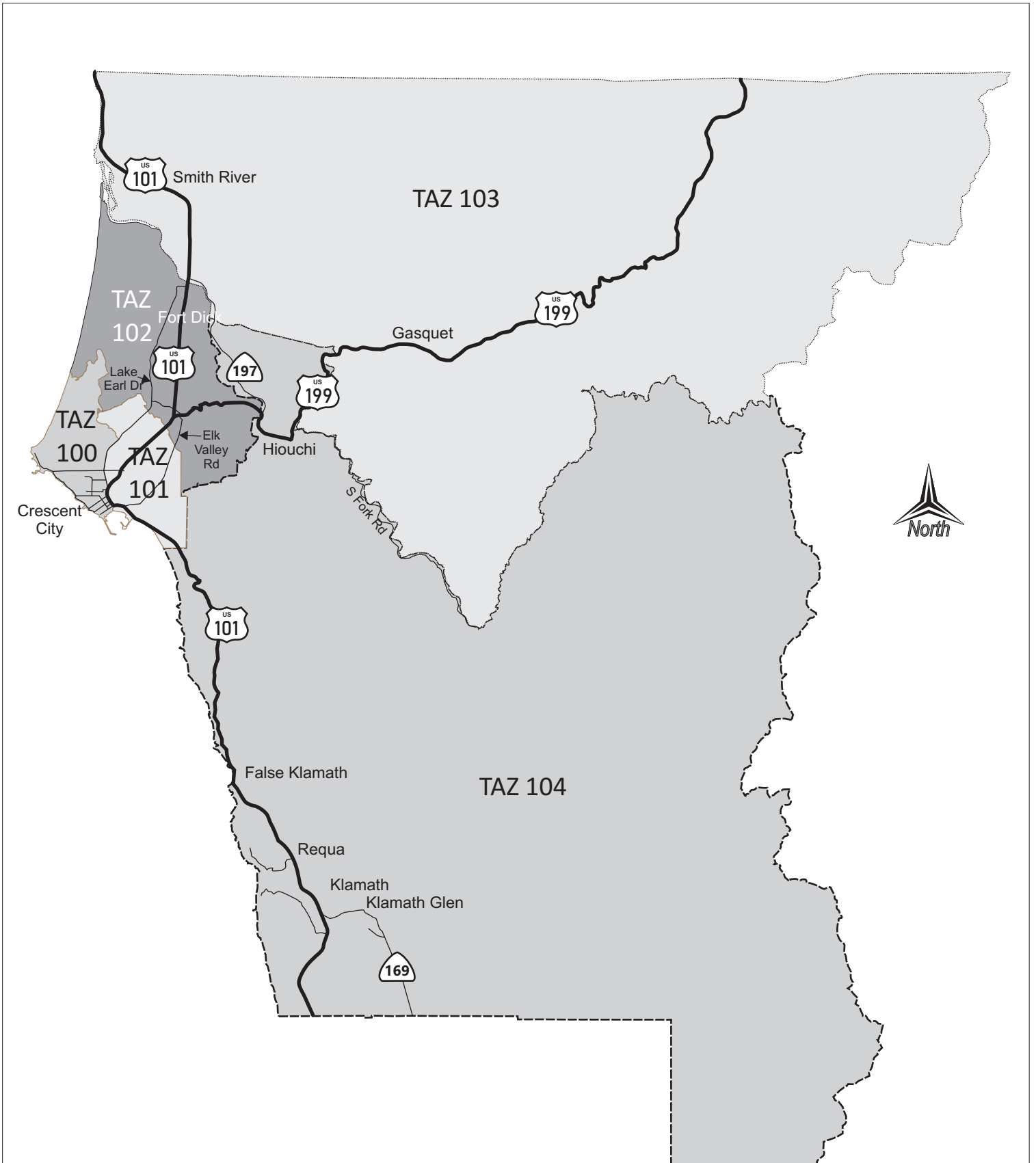


Figure 3-1  
VMT Analysis for Land Development Projects



1. VMT impacts presumed to be less than significant for certain projects, including local-serving retail projects, other local-serving projects, and affordable housing projects. See section 3.2. In addition, projects that are exempt from CEQA would not require a VMT analysis.

Figure 3-2  
Del Norte Region Traffic Analysis Zones



## 4 UPDATE OF THE GENERAL PLAN AND COMMUNITY PLANS

This chapter provides guidance on VMT analysis for updates to the General Plans and Community Plans.

### 4.1 VMT Analysis

VMT analysis for General Plans or Community Plans would generally be conducted by comparing the total VMT/capita of the study area with the plan in the horizon year to the VMT/capita of the study area in the base year. This analysis would be conducted using a travel demand model or sketch planning techniques.

### 4.2 Significance Thresholds

A significant impact would result if the VMT/capita of the study area with the plan in the horizon year exceeds the VMT/capita of the study area in the base year.

### 4.3 Mitigation

VMT mitigation for the General Plan and Community Plans would typically consist of adding improvements to facilitate walking, bicycling, or transit or by reducing the level of roadway improvements included in the plan.

## 5 TRANSPORTATION PROJECTS

SB 743 also applies to transportation projects. Per the adoption language when SB 743 was incorporated into CEQA by the Natural Resources Agency, lead agencies have the discretion to continue using level of service and delay as the performance measure to determine the impacts of transportation projects or to choose a different performance measure. As recommended in OPR's Technical Advisory, the recommendation for the Del Norte region is to use VMT as the performance measure for transportation projects.

### 5.1 Screening Criteria

Per OPR's Technical Advisory, certain types of transportation projects are presumed to have a less than significant impact on transportation. Additional project types that have similar VMT characteristics to the projects described below can also be presumed to have a less than significant impact. Certain roadway projects would also have a less than significant impact. This could occur when a new roadway is proposed that would reduce the lengths required between local origins and destinations. For example, a proposed new bridge crossing a river could reduce VMT if it allowed for less out of direction travel to get to existing bridges.

The projects that meet the screening criteria include the following:

- Rehabilitation, maintenance, replacement, safety, and repair projects designed to improve the condition of existing transportation assets (e.g., highways; roadways; bridges; culverts; Transportation Management System field elements such as cameras, message signs, detection, or signals; tunnels; transit systems; and assets that serve bicycle and pedestrian facilities) and that do not add additional motor vehicle capacity
- Roadside safety devices or hardware installation such as median barriers and guardrails
- Roadway shoulder enhancements to provide "breakdown space," dedicated space for use only by transit vehicles, to provide bicycle access, or to otherwise improve safety, but which will not be used as automobile vehicle travel lanes
- Addition of an auxiliary lane of less than one mile in length designed to improve roadway safety
- Installation, removal, or reconfiguration of traffic lanes that are not for through traffic, such as left, right, and U-turn pockets, two-way left turn lanes, or emergency breakdown lanes that are not utilized as through lanes
- Addition of roadway capacity on local or collector streets provided the project also substantially improves conditions for pedestrians, cyclists, and, if applicable, transit
- Conversion of existing general purpose lanes (including ramps) to managed lanes or transit lanes, or changing lane management in a manner that would not substantially increase vehicle travel
- Addition of a new lane that is permanently restricted to use only by transit vehicles

- Reduction in number of through lanes
- Grade separation to separate vehicles from rail, transit, pedestrians or bicycles, or to replace a lane in order to separate preferential vehicles (e.g., HOV, HOT, or trucks) from general vehicles
- Installation, removal, or reconfiguration of traffic control devices, including Transit Signal Priority (TSP) features
- Installation of traffic metering systems, detection systems, cameras, changeable message signs and other electronics designed to optimize vehicle, bicycle, or pedestrian flow
- Timing of signals to optimize vehicle, bicycle, or pedestrian flow
- Installation of roundabouts or traffic circles
- Installation or reconfiguration of traffic calming devices
- Adoption of or increase in tolls
- Addition of tolled lanes, where tolls are sufficient to mitigate VMT increase
- Initiation of new transit service
- Conversion of streets from one-way to two-way operation with no net increase in number of traffic lanes
- Removal or relocation of off-street or on-street parking spaces
- Adoption or modification of on-street parking or loading restrictions (including meters, time limits, accessible spaces, and preferential/reserved parking permit programs)
- Addition of traffic wayfinding signage
- Rehabilitation and maintenance projects that do not add motor vehicle capacity
- Addition of new or enhanced bike or pedestrian facilities on existing streets/highways or within existing public rights-of-way
- Addition of Class I bike paths, trails, multi-use paths, or other off-road facilities that serve non-motorized travel
- Installation of publicly available alternative fuel/charging infrastructure
- Addition of passing lanes, truck climbing lanes, or truck brake-check lanes in rural areas that do not increase overall vehicle capacity along the corridor

## 5.2 Vehicle Miles Traveled Analysis

VMT analysis of roadway projects that do not meet the screening criteria described above is conducted by determining whether the project was included in the General Plan Transportation and Circulation Element. A less than significant impact can be presumed if the project was included in the General Plan Transportation and Circulation Element or if it is replacing a project in the

Transportation and Circulation Element that would generate more VMT than the subject project. This is due to the fact that projects in the Transportation and Circulation Element have already been incorporated into the planning process and have been analyzed and adopted through a public process. For projects that do require VMT analysis, the typical approach would be to use sketch planning techniques or run a travel demand model.

### 5.3 Significance Thresholds

The significance thresholds for transportation projects is the following:

- Transportation Projects: A significant transportation impact occurs if the proposed project would result in a higher level of VMT than was anticipated for the project in the General Plan Transportation and Circulation Element or Community Plan or if a capacity increasing project is proposed that was not included in the General Plan Transportation and Circulation Element

### 5.4 Mitigation

VMT mitigation measures for roadway projects could include the provision of improvements that facilitate walking, bicycling, or transit or restrictions to roadway travel such as tolls or vehicle occupancy requirements.

## 6 TRANSPORTATION ANALYSIS

Although SB 743 changes the CEQA transportation performance measure from level of service to vehicle miles traveled, it does not affect a local agency's ability to analyze roadway operations and require land development projects to provide improvements when the traffic generated by a project will affect the local roadway system. In the Del Norte region, it is recommended that a transportation analysis (TA) be provided for land development and transportation projects to analyze traffic generated by a project and recommend transportation improvements. While the focus of the analysis will typically be on the roadway system, the TA should also recommend any improvements needed to facilitate walking, bicycling, and transit in the area of the project site, regardless of whether the project has significant or less than significant impact on VMT. While this type of analysis is noted as a Transportation Analysis in this report, there are many similar names that have been used locally and statewide to describe similar types of analyses, including traffic analysis, traffic impact analysis, traffic impact study, etc. This section describes the recommended methodology for analysis of local roadway conditions.

The purpose of an TA is to forecast, describe, and analyze how a development will affect existing and future circulation infrastructure for users of the roadway system, including vehicles, bicycles, pedestrians, and transit. The TA assists transportation engineers and planners in both the development community and public agencies when making land use, mobility infrastructure, and other development decisions. An TA quantifies the expected changes in transportation conditions and translates these changes into transportation system effects in the vicinity of a project.

The roadway transportation analysis included in an TA is separate from the transportation impact analysis conducted as part of the environmental (CEQA) project review process. The purpose of the TA is to ensure that all projects provide appropriate transportation infrastructure improvements in order to accommodate their multimodal transportation demands.

Special situations may call for variation from these guidelines. It is recommended that consultants who prepare an TA conduct early coordination with lead agency staff. This could include submitting a scoping letter (methodology memo) for review by the lead agency to verify the application of these guidelines and to identify any analysis needed to address special circumstances. Caltrans and lead agencies should agree on the specific methods used in local transportation analysis studies involving any state highway facilities

### 6.1 Need for a Study

A TA should be prepared for all projects which generate traffic greater than 60 trips per day. Any project generating more than 60 trips per day should estimate the peak-hour trips in the AM and PM peak-hours and include this information with the traffic analysis required by the General Plan Transportation and Circulation Element. Regardless of the number of trips generated by a project, the lead agency may request a TA to analyze the transportation safety aspects of a project.

### 6.2 Study Parameters

It is recommended that the geographic area examined in the TA include all key intersections, local roadway segments between signalized intersections, intersections, freeway entry and exit ramps, and mainline freeway locations where the proposed project will add 50 or more peak hour trips in either direction to the existing roadway traffic.

The data used in the TA should generally not be more than two years old and should not reflect a temporary interruption (special events, construction detour, etc.) in the normal traffic patterns unless that is the nature of the project itself. If recent traffic data is not available, current counts should be made by the project applicant's consultant.

The recommended goal for roadway level of service (LOS) for roadways other than state highways is level of service C. For state highways and intersections of local roadways with state highways, the appropriate level of service target should be determined by the lead agency in consultation with Caltrans. Roadway capacity analysis should be conducted for the study area described above and improvements should be considered for locations which are projected to operate worse than level of service C (i.e. level of service D, E, or F). In general, a project should provide physical improvements or a fair share payment toward physical improvements when it contributes a substantial amount of traffic to a roadway facility expected to operate at level of service D, E, or F.

### 6.3 Analysis of Project Effects on the Roadway System

The TA should include a roadway analysis to determine the effect that a project will have for each of the previously outlined study scenarios. Daily or peak-hour capacity analyses for freeways and roadway segments. Intersections and freeway ramp merge/diverge areas should be conducted based on AM and PM peak hour conditions. The capacity analysis should be conducted for all of the traffic analysis scenarios described above. The analysis would normally be conducted using the latest edition of the Highway Capacity Manual for intersections and freeway ramp merge/diverge areas. Generalized capacity analysis tables may be used for roadway segment and freeway mainline analysis.

### 6.4 Project Trip Generation and Distribution

Project trip generation would normally be determined using the current edition of the Institute of Transportation Engineers (ITE) Trip Generation Manual. Other potential sources include the San Diego Association of Governments (SANDAG) trip generation guide (Not So Brief Guide of Vehicular Traffic Generation Rates in the San Diego Region, April 2002), articles in the ITE Journal, and customized trip generation rates based on individual research.

Reasonable reductions to trip rates may also be considered with proper analysis of pass-by and diverted traffic on adjacent roadways and for mixed-use developments.

Project trips can be assigned and distributed either based on estimated trip distribution patterns or through use of a travel demand model. The magnitude of the proposed project will usually determine which method is employed.

If the manual method is used, the trip distribution percentages could be derived from existing local traffic patterns or optionally (with local agency approval) by professional judgement. If the computer model is used, the trip distribution percentages could be derived from a select zone assignment. The centroid connectors should accurately represent project access to the street network. Preferably the project would be represented by its own traffic zone. Some adjustments to the output volumes may be needed (especially at intersections) to smooth out volumes, quantify peak volumes, adjust for pass-by and diverted trips, and correct illogical output.



## 6.5 Scenarios to be Studied

The following scenarios are recommended to be addressed in the roadway analysis (unless there is concurrence with the lead agency that one or more of these scenarios may be omitted). Some exceptions are noted at the end of this list:

Existing Conditions: Document existing traffic levels and peak-hour levels of service in the study area. Identify locations where roadways do not meet target levels of service for existing conditions.

Existing Plus Project Conditions: Analyze the effect of the proposed project in addition to existing conditions. This scenario identifies the effect of a project on the transportation network with no other changes in conditions.

Near-term (approved and pending): Analyze the cumulative conditions resulting from the development of other approved and reasonably foreseeable pending projects that are expected to influence the study area. This is the baseline against which project effects are assessed. The lead agency or adjacent jurisdictions may be able to provide copies of the traffic studies for the other projects if they are already approved. If data is not available for near-term cumulative projects, an ambient growth factor (i.e. percent per year increase) is recommended. If applicable, transportation network improvements should also be included in this scenario. This would include programmed and fully funded network improvements that are scheduled to open prior to the project's expected opening day.

Near-term + Proposed Project: Analyze the effects of the proposed project at its expected opening day in addition to near-term baseline conditions.

Horizon Year: Identify traffic forecasts, typically approximately 20 years in the future, through the use of a traffic forecast methodology approved by the lead agency.

Horizon Year + Proposed Project: Analyze the additional project traffic effect to the horizon year condition.

## 6.6 Need for Roadway Improvements

Roadway improvements or a fair share contribution for roadway improvements should generally be recommended for any roadway facilities that are expected to operate worse than the target of level of service C. Following is specific guidance for individual situations:

- For unsignalized intersections that are expected to operate at LOS D, E, or F, a signal warrant analysis should be conducted using peak hour warrants. If this analysis indicates that a traffic signal is not warranted, the intersection should generally be assumed to operate at LOS C and no improvements would be needed.
- For roadway segments that are expected to operate at LOS D, E, or F using roadway segment analysis, consideration can be given to the operation of the traffic signals at either end of the segment (if applicable). If the adjacent traffic signals are expected to operate at LOS C or better, the roadway segment would generally not need improvements.

- For all facilities, roadway improvements would generally not be needed if the project traffic is less than 5% of total traffic with the project.
- In cases where a fair share payment is recommended it should be based on the project's share of total future traffic with the project.

## 6.7 Effect of Trucks on Roadway Pavements

For projects with large concentrations of truck traffic, the TA should include an analysis of the effect of truck traffic on the pavement condition of affected roadways. Such projects would include industrial developments of all types, sand and gravel mining, landfills, and batch processing plants. The pavement analysis should be conducted for the same study area as the remainder of the TA. Improvements should be recommended whenever the project would have a substantial effect on the roadway pavement and the intent of the improvement would be to restore the pavement to the pre-project condition or better.

## 7 ADDITIONAL RESOURCES FOR VEHICLE MILES TRAVELED ANALYSIS

This chapter provides locations of websites that can be used to locate additional resources that may be useful in conducting VMT analyses in the Del Norte region:

- Detailed TAZ Maps for the California Statewide Model (Northern California Institute of Transportation Engineers website): [www.norcalite.org](http://www.norcalite.org)
- Governor’s Office of Planning and Research (ORP): <http://www.opr.ca.gov/ceqa/updates/sb-743/>
- California Air Pollution Control Officers Association (CAPCOA). This organization has provided one of the most widely used resources for VMT mitigation (Quantifying Greenhouse Gas Mitigation Measures, August2010). It can be found at the following website: <http://www.capcoa.org/wp-content/uploads/2010/11/CAPCOA-Quantification-Report-9-14-Final.pdf>
- SANDAG Mobility Management Project and VMT Reduction Tool: <https://www.icommutesd.com/planners/tdm-local-governments>
- Caltrans SB 743 Website: <https://dot.ca.gov/programs/transportation-planning/office-of-smart-mobility-climate-change/sb-743>

**APPENDIX A**  
**SCREENING**  
**CRITERIA AND**  
**THRESHOLD**  
**EVIDENCE**

## SCREENING CRITERIA AND THRESHOLD EVIDENCE

This appendix provides context and evidence for the screening criteria and threshold evidence included in Chapters 3 for Land Development Projects, Chapter 4 for Update of the General Plan and Community plans, and Chapter 5 for Transportation Projects.

### Screening Criteria

Certain types of development projects are presumed to have less than significant impacts to the transportation system, and therefore would not be required to conduct a VMT analysis if any of the following criteria are established, based on substantial evidence.

#### Small Projects

Small projects, which are whole projects with independent utility that would generate less than 110 average daily vehicle trips (ADT), would also not result in significant transportation impacts on the transportation system:

**Evidence** – The OPR Technical Advisory states that “projects that generate or attract fewer than 110 trips per day generally may be assumed to cause a less-than-significant impact.” This is supported by the fact that CEQA provides a categorical exemption for existing facilities, including additions to existing structures of up to 10,000 square feet, so long as the project is in an area where public infrastructure is available to allow for maximum planned development, and the project is not in an environmentally sensitive area. (CEQA Guidelines, § 15301(e)(2). Typical project types for which trip generation increases relatively linearly with building footprint (e.g., general office building, single tenant office building, office park, or business park) generate or attract an additional 110- 124 trips per 10,000 square feet. Therefore, absent substantial evidence otherwise, it is reasonable to conclude that the addition of 110 or fewer trips could be considered not to lead to a significant impact.

#### Local-Serving Retail and Similar Uses

Local-serving retail is defined in the Del Norte region as any retail development, regardless of size, that is expected to serve customers within the region. These types of developments would reduce trip lengths (and therefore VMT) by offering additional retail choices allowing customers to make shorter trips than they would make to more distant retail developments. This would apply to retail developments intended to serve customers in the immediate area (such as a convenience store located in a rural portion of the region). It would also apply to retail developments that would serve customers in the entire Del Norte region, reducing the need for travel to travel to more distant retail developments in adjacent counties.

**Evidence** – The OPR Technical Advisory provides that “because new retail development typically redistributes shopping trips rather than creating new trips, estimating the total change in VMT (i.e., the difference in total VMT in the area affected with and without the project) is the best way to analyze a retail project’s transportation impacts.” Local serving retail generally shortens trips as longer trips from regional retail are redistributed to new local retail.

## Local-Serving Public Facilities (Excluding Schools)

Similar to local-serving retail, local-serving public facilities other than schools such as government offices, medical offices, and parks serve the community and either produce very low VMT or divert existing trips from established local facilities.

**Evidence** – Similar to local serving retail, local serving public facilities would redistribute trips and would not create new trips. Thus, similar to local serving retail, trips are generally shortened as longer trips from a regional facility are redistributed to the local serving public facility. The evidence from the OPR Technical Advisory described above also applies to local-serving public facilities.

## Affordable Housing Projects

Residents of affordable residential projects typically generate less VMT than residents in market rate residential projects. In recognition of this effect, and in accordance with the OPR Technical Advisory, deed-restricted affordable housing projects meet the region's screening criteria and would not require a VMT analysis.

Projects that provide affordable housing affordable to persons with a household income equal to or less than 50 percent of the area median income as defined by California Health and Safety Code Section 50093, housing for senior citizens (as defined in Section 143.0720(e)), housing for transitional foster youth, disabled veterans, or homeless persons (as defined in 143.0720(f)) are not required to complete a VMT analysis.

**Evidence** –Affordable residential projects generate fewer trips than market rate residential projects. This supports the assumption that the rate of vehicle ownership is expected to be less for persons that qualify for affordable housing. Additionally, senior citizens, transitional foster youth, disabled veterans, and homeless individuals also have low vehicle ownership rates.

## Redevelopment Projects That Cause a Net Reduction in VMT

A redevelopment project that demonstrates that the total project VMT is less than the existing land use's total VMT is not required to complete a VMT analysis.

**Evidence** – Consistent with the OPR Technical Advisory, “[w]here a project replaces existing VMT-generating land uses, if the replacement leads to a net overall decrease in VMT, the project would lead to a less-than-significant transportation impact. If the project leads to a net overall increase in VMT, then the thresholds described above should apply.”

## Thresholds

If a project is required to complete a VMT analysis, the project's impacts to the transportation system would be significant if the VMT would exceed the average VMT/capita or VMT/employee of the traffic analysis zone (TAZ) in which the project is located.

## Residential Projects

**Threshold** – below average household VMT/capita in the TAZ where the project is located.

**Evidence** – The OPR Technical Advisory recommends the use of VMT/capita as the performance measure for VMT analysis of residential projects. It provides specific recommendations for numerical thresholds to be used on a statewide basis, but also includes the following statement: “In rural areas of non-MPO counties (i.e., areas not near established or incorporated cities or towns), fewer options may be available for reducing VMT, and significance thresholds may be best determined on a case-by-case basis. Note, however, that clustered small towns and small town main streets may have substantial VMT benefits compared to isolated rural development, similar to the transit oriented development described above.” Del Norte County is a non-MPO county and these guidelines recommend the use of significance thresholds developed for the local characteristics of the Del Norte region. These guidelines extend the concept of rural guidelines developed on a case by case basis to Crescent City and other portions of the Del Norte region that may not be considered rural by other definitions. For the purpose of VMT analysis, the same characteristics of rural areas of non-MPO counties mentioned by OPR apply to all of the Del Norte region. These include lack of a high concentration of transit, pedestrian, and bicycle facilities and a high degree of reliance on the automobile mode for basic transportation. However, these guidelines acknowledge the VMT benefits of providing transit, bicycle, and pedestrian improvements in small towns and small town main streets by encouraging the use of these types of improvements as mitigation measures.

#### Office/Employment Projects

**Threshold** – below average VMT/employee in the TAZ where the project is located.

**Evidence** – See evidence provided above for residential projects.

#### Transportation Project Screening Criteria

This section provides discussion of transportation projects that are listed in Chapter 5 and would be presumed to have a less than significant impact., These projects would not be required to conduct VMT analysis as well as significance thresholds for projects that would require a VMT analysis.

**Evidence** – The list of projects in Chapter 5 is consistent with recommendations in the OPR Technical Advisory that indicates projects that can be presumed to have a less than significant impact on VMT due to overall project characteristics.

#### Threshold

For transportation projects, significant impact occurs if the project results in a net increase in VMT as compared with the level of VMT expected to occur through implementation of the Circulation Element of the General Plan. In practice, this means that projects included in the General Plan Circulation would have a less than significant VMT impact and VMT-increasing projects that are not included in the General Plan Circulation Element would have a significant impact. Projects that replace a project in the General Plan Circulation Element would have a significant impact if they would be expected to generate more VMT than the project they are replacing.

**Evidence** – OPR’s Technical Advisory does not have a recommended threshold for transportation projects and leaves this determination up to lead agencies. VMT analysis for roadway projects can best be considered at a planning level when developing regional or agency-specific transportation plans. The transportation plan for the region or agency is developed in consideration of the need to reduce

automobile travel and the plan provides a coordinated effort to achieve this goal. Projects approved at the planning level are considered to support regional or agency-specific goals with respect to VMT.



**APPENDIX B**  
**POTENTIAL**  
**PROJECTS FOR**  
**USE IN VMT**  
**MITIGATION**

Table B-1  
Del Norte Region - Transit, Bicycle & Pedestrian Projects

TAZ	Project Description	Project Type	Cost (\$1,000s)	Source Document	Project Status
100	Bus Pullout at Washington and Arlington	Transit	\$ 36	RTP	Long Term
100	Bench at Northcrest Dr @ Shop Smart	Transit	\$ 1	RTP	Long Term
100	El Dorado Street - Bess Maxwell School SRTS	Ped	\$ 1,076	RTP	Short Term
100	Front Street - A St. to L St. Pedestrian Improvements	Ped	\$ 1,800	RTP	Short Term
100	Pebble Beach Dr - 6th St. to 9th St. Pedestrian Improvements	Ped	\$ 750	RTP	Long Term
100	8th Street/K Street - Class 2 Bike Lanes	Bike	\$ 60	RTP	Long Term
101	Parkway Drive	Ped	\$ 332	RTP	Short Term
101	Sunset Circle Class 1 Bikeway	Bike	\$ 800	RTP	Short Term
100/101	City Wide Priority Pedestrian Improvements	Ped	\$ 1,500	RTP	Long Term
100/101	US 101 Crescent City Non Motorized Improvement Project	Ped/Bike	TBD	RTP	Long Term
All	Security Improvements	Transit	\$ 62	RTP	Near Term
All	Replace Buses (3)	Transit	\$ 270	RTP	Near Term
All	Replace Intercity Bus	Transit	\$ 200	RTP	Near Term
All	Replace Buses (3)	Transit	\$ 270	RTP	Near Term
All	Replace Intercity Bus	Transit	\$ 200	RTP	Near Term
All	Security Improvements	Transit	\$ 59	RTP	Near Term
All	Replace Buses (3)	Transit	\$ 401	RTP	Near Term
All	Replace Intercity Bus	Transit	\$ 200	RTP	Near Term
All	Continued Vehicle Replacement	Transit	\$ 3,276	RTP	Long Term
All	Mobile Communications Equipment	Transit	\$ 75	RTP	Long Term
All	Bus Shelter Improvements to Top Priority Locations	Transit	\$ 65	RTP	Long Term
All	Passenger Facility Improvements to Top Priority Locations (landscape, trash receptacle, accessible pathway etc.)	Transit	\$ 105	RTP	Long Term
All	Other Bus Shelter Improvements	Transit	\$ 19	RTP	Long Term
All	Signage Improvements	Transit	\$ 15	RTP	Long Term
All	Accessibility Improvements	Transit	\$ 39	RTP	Long Term
All	Regional Bike Map	Bike	\$ 10	RTP	Short Term
All	Bicycle Racks - 8 Locations	Bike	\$ 8	RTP	Long Term
100	Arlington Avenue - Sidewalk, Washington Blvd and Adams Ave	Ped	\$ 500	ATP Priority	Short Term
100	Front Street - A St to N St	Multi-Use	\$ 9,000	ATP Priority	Short Term
100	Glen Street- Sidewalk, Small to Hamilton	Ped	\$ 254	ATP Priority	Short Term
100	Eldorado Street - Sidewalk, Pacific Ave & Copper Ave	Ped	\$ 900	ATP Priority	Short Term

100	Northcrest Dr - Sidewalk/Class II Washington to Harding	Ped/Bike	\$ 1,250	ATP Priority	Short Term
100	West Harding Ave - Sidewalk, El Dorado to Breen	Ped	N/A	ATP Priority	Short Term
101	Blackwell Lane - Class II Bike Lane from Lake Earl Dr to Railroad Ave	Bike	\$ 1,363	ATP Priority	Short Term
101	Hwy 101 Gateway Projects	Multi-Use	\$ 1,153	ATP Priority	Short Term
101	Sunset Circle- Existing Gap on CA Coastal	Multi-Use	N/A	ATP Priority	Short Term
103	First St & Sarina Rd - Class II Bike Lane Hwy 101/Sarina Rd to First St to Fred Haight Dr	Bike	\$ 2,200	ATP Priority	Short Term
103	Fred Haight Drive - Class III Bike Lane Hwy 101 to Wilson Ave	Bike	\$ 65	ATP Priority	Short Term
100	9th, Front, K, and 2nd Streets Class II	Bike	\$ 59	ATP	Long Term
100	Harding Avenue - Within City Limits, Class II	Bike	N/A	ATP	Long Term
100	Old Mill Road - Dillman Rd to Wild Life Area, Class I/II	Bike	\$ 1,484	ATP	Long Term
100	Riverside Street - Washington Blvd to Dead Lake, Class I/II	Bike	\$ 201	ATP	Long Term
101	Enderts Beach Road - Hwy 101 to National Parks Service, Class I/II	Bike	\$ 209	ATP	Long Term
101	Harding Avenue - Outside City Limits, Class II	Bike	N/A	ATP	Long Term
101	Hobbs Wall Trail - M St to DFG	Multi-Use	\$ 2	ATP	Long Term
101	Hobbs Wall Trail - 2nd St to Howland Hill	Multi-Use	\$ 728	ATP	Long Term
101	Hobbs Wall Trail - Oxbow Pond to Parkway Dr	Multi-Use	\$ 1,725	ATP	Long Term
101	Humboldt Road - Roy Ave to Hwy 101, Sidewalk	Ped	\$ 1,049	ATP	Long Term
101	Railroad Avenue - Parkway Dr to Blackwell, Class II	Bike	\$ 1,293	ATP	Long Term
102	Elk Valley Crossroad - Hwy 101 to Lake Earl Dr Class II	Bike	\$ 1,030	ATP	Long Term
101/102	Elk Valley Road - Howland Hill to Parkway, Class II/III	Bike	\$ 3,300	ATP	Long Term
101/102	Railroad Avenue - Parkway Dr to Blackwell, Class II	Bike	\$ 481	ATP	Long Term
102	Kellogg Road - Lower Lake to Beach, Class II	Bike	\$ 5	ATP	Long Term
102	Lower Lake Road - Lake Earl to Kellogg, Class III	Bike	\$ 10	ATP	Long Term
102	Lower Lake Road - Kellogg to Pala, Class III	Bike	\$ 5,655	ATP	Long Term
102	Lower Lake Road - Lake Earl to Kellogg, Class II	Bike	\$ 4,807	ATP	Long Term
102	Morehead Road - Lake Earl to Lower Lake, Class II	Bike	\$ 2,745	ATP	Long Term
103	Gasquet Flat Road - US 199 to Middle Fork Gasquet Rd, Class II	Bike	\$ 3,793	ATP	Long Term
103	Middle Fork Gasquet Road - US 199 to Gasquet Flat, Class II	Bike	\$ 165	ATP	Long Term

103	Ocean View Drive - Hwy 101 N to Indian Rd, Class II	Bike	\$ 2,682	ATP	Long Term
103	Ocean View Drive - Hwy 101 S to Indian Rd, Class II	Bike	\$ 5,226	ATP	Long Term
103	Rowdy Creek Road - Hwy 101 to Smith RiverRec Area, Class III	Bike	\$ 29	ATP	Long Term
103	Timbers Blvd - Hwy 101 to Fred Haight Dr	Bike	\$ 811	ATP	Long Term
101/104	Pacific Coast Bike Route - <b>5 Projects</b>	Bike	\$ 8,500	ATP	Long Term
104	South Fork Road - Big Fla Intersection to Douglas Park Rd, Class III	Bike	\$ 47	ATP	Long Term
All	Elk Valley Connector Trail - Mill Creek TH to Martin Ranch	Multi-Use	N/A	ATP	Long Term
All	Coast to Caves Trailway	Multi-Use	N/A	ATP	Long Term
All	Coast to Crest Trailway	Multi-Use	N/A	ATP	Long Term

# APPENDIX C

# CASE STUDIES

# APPENDIX C

## CASE STUDIES

### Introduction

This appendix summarizes analysis of VMT impacts of five case study projects in the Del Norte region. The first three are hypothetical projects (two residential, the other office). The final two are retail projects already approved and built. They are reanalyzed as though they were submitted after SB 743 implementation.

### Case Study 1: Residential Project

This case study project is presumed to be located in the City of Crescent City west of US 101 between an RV Park and the harbor (coordinates 41.751, -124.189). It consists of 214 multifamily rental dwelling units and 24 single family dwelling owner-occupied units.

#### ***Analysis overview***

The analysis uses data from the California Statewide Travel Demand Model (CSTDM).

This residential project is located in Traffic Analysis Zone 101 (TAZ 101) with an average VMT/capita of 7.00 (see Table 3-1). This is a typical project and there is no reason to expect that it would have a higher or lower VMT/capita than the average for the TAZ. Since project VMT/capita is assumed to be equal to or above the VMT/capita of the zone in which the project is located, it has a significant VMT impact

#### ***Mitigation of Residential Project VMT***

A survey of pedestrian facilities near the project site indicates that the installation of curb ramps and sidewalk repairs are needed. Based on the ITE Trip Generation Manual, this project is expected to generate 1,857 daily trips. This is the equivalent of 179 single-family dwelling units. The city and the applicant agree on a set of off-site pedestrian improvements including three curb ramps, 1,320 linear feet of sidewalk, and 660 feet of sidewalk with curb, gutter, and asphalt patch. The applicant provides the pedestrian improvements as a condition of approval of the project. For reporting purposes, the assumed VMT/capita reduction is 1% of 7.00 or 0.07. The resulting VMT/capita after mitigation is 6.93 which is below the average VMT/capita in the TAZ which the project is located. After mitigation, the project has a less than significant impact.

## Case Study 2: Office Project

This case study provides an example of a VMT estimate for an office project. This hypothetical project would be located west of Highway 101 immediately south of the Dollar General Store on in the unincorporated community of Smith River in Del Norte County (coordinates 41.924, -124.141). It is an office building consisting of 110,000 square feet of office space.

### ***Analysis overview***

The analysis used data from the California Statewide Travel Demand Model (CSTDM).

This office project is located in Traffic Analysis Zone (TAZ 103) with an average VMT/employee of 22.33 (see Table 3-1). This is a typical project and there is no reason to expect that it would have a higher or lower VMT/employee than the average for the TAZ. Since project VMT/employee is assumed to be equal to or above the VMT/employee of the zone in which the project is located, it has a significant VMT impact

### ***Mitigation of Office Project VMT***

Based on the ITE Trip Generation Manual, this project is expected to generate 1,124 daily trips. This is the equivalent of 108 single-family dwelling units. At a mitigation cost of \$1,275 per equivalent single-family dwelling unit, the target value of pedestrian/bike/transit mitigation is 137,700. A survey of transit, bicycle, and pedestrian facilities near the project site indicates that there are no suitable improvement projects in the vicinity of the project site. However, a review of Table B-1 in Appendix B indicates that TAZ 103 includes a project to install a Class II bikeway on Middle Fork Gasquet Road from US 99 to Gasquet Flat at a cost of \$165,000 Class III bikeway on Rowdy Creek Road between US 101 and the Smith River Recreation Area. The applicant agrees to implement this project as a condition of approval of the project. For reporting purposes, the assumed VMT/employee reduction is 1% of 22.33 or 0.22. The resulting VMT/capita after mitigation is 23.11 which is below the average VMT/capita in the TAZ in which the project is located. After mitigation, the project has a less than significant impact.

## Case Study 3: “Rolling” Rural Residential Project

This project is envisioned as a 10-year rollout of 200 acres of timberland zoning converting into Rural Residential lots, presumed to be located in TAZ 104. The only access is off the state highway via an underdeveloped county road with no feasible opportunity to improve it. The rezone by definition of the rollout will not take place for a decade, and after that, it is unlikely that a single developer will submit a subdivision proposal for any substantial amount of the property. More likely, based on local development practices, a minor subdivision creating 4 parcels and a remainder will occur; the process will repeat for up to a half century. A maximum 50 residential lots are anticipated.

The rural residential project is located in Traffic Analysis Zone (TAZ 104) with an average VMT/capita of 30.13 (see Table 3-1). This is a typical project and there is no reason to expect that it would have a higher or lower VMT/capita than the average for the TAZ. Since project VMT/capita is assumed to be equal to or above the VMT/capita of the zone in which the project is located, it has a significant VMT impact

### ***Mitigation of Rural Residential Project VMT***

The recommended total mitigation cost is \$1,275 per unit or a total of \$63,750.

If this project were owned by a single applicant who would be selling homes to individual landowners, typical practice would be to provide \$63,750 worth of mitigation at the time of occupancy of the first home. However, in the case of this project, homes are expected to be built gradually over time and each homeowner is expected to pay a share of the total mitigation cost (i.e. \$1,275) at the time of occupancy. Since payment of \$1,275 is too small to fund an individual improvement project, the county conditions the project to provide one of the following forms of mitigation (to be determined by the county at the time of development):

- If a single dwelling unit or multiple dwelling units are planned to be built together and the mitigation payments at a rate of \$1,275/dwelling unit would be too small to pay for a physical transportation improvement, the county will collect a development fee of \$1,275 to be used for general maintenance of bicycle and pedestrian facilities on a county-wide basis.
- If a large number of dwelling units are planned to be built as a group by a single owner, the County could require that a physical transportation improvement be built with the specific improvement to be determined at the time of development.

Either of the scenarios described above would be sufficient to mitigate the project's VMT impacts. For reporting purposes, the assumed VMT/employee reduction is 1% of 30.13 or 0.30. The resulting VMT/capita after mitigation is 29.83 which is below the average VMT/capita in the TAZ in which the project is located. After mitigation, the project has a less than significant impact.

The rate of \$1,275 per dwelling unit would be adjusted for inflation beginning at the date of project approval using the Consumer Price Index for Urban Wage Earners and Clerical Workers (CPI-W).

#### Case Study 4: Smith River Dollar General Store Project

This is an existing project, reanalyzed as if it were a new project under SB 743. The project is a 9,100 square foot retail store to be located along US 101 just south of the Del Norte County community of Smith River (coordinates 41.925, -125.141). The project is located in TAZ 103 of the Statewide Travel Demand Model.

##### ***Project Trip Generation***

This analysis utilized trip generation rates from the Institute of Transportation Engineers (ITE) publication Trip Generation, 10th Edition, specifically rates for "Variety Store" (Code 813). The project is expected to generate approximately 578 daily trips on a weekday basis.

##### ***Need for SB 743 Analysis***

OPR recommends that local-serving retail projects can be presumed to have a less than significant transportation impact. This is because local-serving retail typically reduces trip lengths by providing additional destinations that tend to replace trips to more distant retail locations. As local-serving retail it



would be exempted from VMT analysis if Del Norte County believes the project would serve to shorten shopping trips.

## Case Study 5: Wal-Mart Expansion Project

### ***Project Description***

This is an existing project, reanalyzed as if it were a new project under SB 743. The project is a proposed 87,035 sq. ft. expansion of the existing Wal-Mart, located on East Washington Boulevard near US 101 in Del Norte County just north of Crescent City (coordinate 41.774, -124.190). The project is located in TAZ 101 of the Statewide Travel Demand model.

### ***Project Trip Generation***

The trip generation of the proposed project was based on the Institute of the Transportation Engineers Trip Generation Manual, 10th Edition. The proposed project expansion would generate 6,252 daily trips.

### ***Need for SB 743 Analysis***

OPR recommends that local-serving retail projects can be presumed to have a less than significant transportation impact. This is because local-serving retail typically reduces trip lengths by providing additional destinations that tend to replace trips to more distant retail locations. For this project, the key question is whether it fits into the category of local-serving. Expressed in terms of VMT generation, the question is whether the project would attract local shoppers who would otherwise travel to more distant retail locations. The county requests a market survey.

If the market survey shows that the project would attract local trips and would shorten trip lengths, the project is considered to decrease VMT and the impact of the project is considered less than significant. No mitigation measures are needed.

If the market survey shows that the project would attract travelers from throughout the Del Norte region and it is presumed that these trips would be drawn from shoppers who are currently traveling to more local shopping destinations rather than destinations outside the region, additional VMT analysis is necessary. Using the market survey, sketch planning techniques are used to estimate the VMT increase due to the project and the resulting increase is 20,000 VMT/day. It is not considered feasible to fully mitigate this VMT increase and a significant transportation impact is noted. It is decided that the project provide mitigation at the rate recommended in this guide. The project is estimated to generate 1,014 daily trips which is the equivalent of 98 single-family dwelling units. If the county decides to approve the project, appropriate bicycle and pedestrian projects in the amount of at least \$124,950 (\$1,275 per equivalent single-family dwelling unit) would be provided and an EIR and a statement of overriding considerations would be needed.